

HPV 16 DNA (40 ng final) was mixed with trans-ULS labelled internal primers (120-160 ng final) in a solution of 6x SSC. This solution was denatured and incubated at 60°C for 1 hour. This step was repeated two more times and was followed by a column purification. Subsequent, a PCR amplification was carried out as follows: a PCR master mix consisting of a PCR buffer, HPVfor and HPVrev primers (10 $\mu$ M

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#### **ABSTRACT**

The invention relates to a method for distinguishing at least two target bio-organic molecules with dyes selected from a pool of at least two dyes, the method comprising: (a) providing a first set of at least two probes, wherein each probe recognizes a target bio-organic molecule in a first set of target bio-organic molecules, and wherein each probe is distinctly-labelled with primary labels that are distinct from one another due to the presence of dyes in distinct ratios; (b) providing a second set of probes distinctly-labelled with said primary labels described in step (a), wherein each probe in said second probe set recognizes a target bio-organic molecule in a second set of target bio-organic molecules; wherein each probe in said first or second probe set is further labelled with the same first binary label, wherein said first binary label is distinct from said primary labels; and (c) contacting said at least two target bio-organic molecules with said probe sets, wherein said target bio-organic molecules are distinguished.